

## **Appendix B**

### **Correspondence**

**Public Information Meeting**  
**July 28, 2009**





# **Cartersville Diversion Dam Public Information Meeting**

The Montana Department of Fish, Wildlife and Parks has contracted with DOWL HKM to prepare a feasibility analysis and environmental assessment (EA) for fish passage alternatives at Cartersville Diversion Dam. **A public information meeting will be held at the Rosebud County Library meeting room at 7:00 p.m. on Tuesday, July 28, 2009.**

## **Cartersville Diversion Dam Public Information Meeting**

The Montana Department of Fish, Wildlife and Parks has contracted with DOWL HKM to prepare a feasibility analysis and environmental assessment (EA) for fish passage alternatives at Cartersville Diversion Dam. A public information meeting will be held at the Rosebud County Library meeting room at 7:00 p.m. on Tuesday, July 28, 2009.

## MEMORANDUM

TO: Jim Darling ([jdarling@mt.gov](mailto:jdarling@mt.gov))

FROM: Gary Elwell

CC: Pam Ash ([pamkashp@aol.com](mailto:pamkashp@aol.com))  
Brad Schmitz ([brschmitz@mt.gov](mailto:brschmitz@mt.gov))  
Don Youngbauer ([dyoungbauer@yahoo.com](mailto:dyoungbauer@yahoo.com))

RE: Cartersville Irrigation Dam  
Fish Passage Alternative Analysis and EA  
Public Information Meeting 7/28/09

DATE: July 30, 2009  
h:\26\10216\memotojimdarling.docx

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A public information meeting was held in the Rosebud County Library in Forsyth, Montana on July 28, 2009 at 7:00 p.m. An attendance list is attached. Jim Darling, FWP, presented the project history. Gary provided a power point presentation describing DOWL HKM and the feasibility/environment assessment tasks to be completed. Forms were provided for comments relative to the proposed project. No written comments were submitted during the meeting. Discussion during the meeting included the following:

- Will the selected fish passage project be built for sure?
- Where will the money come from?
- Will existing fishing sites be impacted?
- Will trees hang up on a rock ramp?
- If the Cartersville Irrigation District (CID) approves a fish passage plan, will it make it easier to get funding for other projects (e.g. canal lining in the future)?
- The CID generally is satisfied with the operation of the diversion dam as is, but would like new headgates and a strengthen dam
- Would a rock ramp be built all the way across the river?
- The diversion dam is an important asset to the community.

**Public Information Meeting  
Cartersville Diversion Dam  
July 28, 2009  
S i g n u p   S h e e t**



<b>Name:</b>	Jack N. Clifford
<b>Representing:</b>	
<b>Address:</b>	P.O. 28 Forsyth, MT 59327
<b>Email:</b>	<a href="mailto:jclifford@rangeweb.net">jclifford@rangeweb.net</a>
<b>Phone:</b>	346-2648
<b>Name:</b>	Steve Seleg
<b>Representing:</b>	CID
<b>Address:</b>	1523 Cartersville Road Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	347-5249
<b>Name:</b>	Mark Holmes
<b>Representing:</b>	Holmes Ranch
<b>Address:</b>	157 Thurlow Road Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	347-5376
<b>Name:</b>	Bud Biery & Sean Zepeda
<b>Representing:</b>	Biery Ranch
<b>Address:</b>	3 Sand Creek Road W Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	351-1486
<b>Name:</b>	Pat Freed
<b>Representing:</b>	
<b>Address:</b>	Forsyth, MT 59327
<b>Email:</b>	
<b>Phone:</b>	346-7575

<b>Name:</b>	Burt Williams
<b>Representing:</b>	Nature Conservancy
<b>Address:</b>	Fishtail, MT
<b>Email:</b>	
<b>Phone:</b>	
<b>Name:</b>	Don Youngbauer
<b>Representing:</b>	YRCDC
<b>Address:</b>	P.O. Box 68 Forsyth, MT 59327
<b>Email:</b>	
<b>Phone:</b>	346-2131
<b>Name:</b>	Jack Ferguson
<b>Representing:</b>	CID
<b>Address:</b>	120 RT 446 Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	347-5334
<b>Name:</b>	Pam Ash
<b>Representing:</b>	CID
<b>Address:</b>	Box 668 Forsyth, MT 59327
<b>Email:</b>	<a href="mailto:pamkashp@aol.com">pamkashp@aol.com</a>
<b>Phone:</b>	346-1600
<b>Name:</b>	Kirk Montgomery
<b>Representing:</b>	CID
<b>Address:</b>	92 Route 446 Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	

<b>Name:</b>	Sonja Crocker
<b>Representing:</b>	Crocker Ranch
<b>Address:</b>	50 Thurlow Road Rosebud, MT 59347
<b>Email:</b>	<a href="mailto:srcrocker@rangeweb.net">srcrocker@rangeweb.net</a>
<b>Phone:</b>	347-5520
<b>Name:</b>	Cray Weight
<b>Representing:</b>	XH Cattle
<b>Address:</b>	P.O. Box 503 Forsyth, MT 59327
<b>Email:</b>	<a href="mailto:xhcattle@rangeweb.net">xhcattle@rangeweb.net</a>
<b>Phone:</b>	351-1191
<b>Name:</b>	Joseph Schiffer
<b>Representing:</b>	Schiffer Ranch Co.
<b>Address:</b>	106 Sand Creek Road E Rosebud, MT 59347
<b>Email:</b>	<a href="mailto:rsranch@rangeweb.net">rsranch@rangeweb.net</a>
<b>Phone:</b>	347-5421 or 951-1458
<b>Name:</b>	Randy Kraus
<b>Representing:</b>	Kraus Ranch
<b>Address:</b>	45 Sand Creek Road Rosebud, MT 59347
<b>Email:</b>	<a href="mailto:rdkraus84@hotmail.com">rdkraus84@hotmail.com</a>
<b>Phone:</b>	347-5427
<b>Name:</b>	Jack Crocker
<b>Representing:</b>	Crocker Ranch
<b>Address:</b>	44 Thurlow Road W Rosebud, MT 59347
<b>Email:</b>	
<b>Phone:</b>	347-5276
<b>Name:</b>	Gary E. Elwell, P.E.
<b>Representing:</b>	DOWL HKM
<b>Address:</b>	222 N 32 <sup>nd</sup> Street, Ste. 700 PO Box31318 Billings, MT 59107-1318
<b>Email:</b>	<a href="mailto:gewell@hkminc.com">gewell@hkminc.com</a>
<b>Phone:</b>	869-6310

# Public Information Meeting

## Cartersville Diversion Dam

### November 3, 2009

### C o m m e n t s



<b>Name:</b>		
<b>Representing:</b>		
<b>Address:</b>		
<b>Email:</b>		
<b>Phone:</b>		
<b>Contacts:</b>	Gary Elwell, P.E. DOWL HKM P.O. Box 31318 Billings, MT 59107-1318 Ph: 406.656.6399 Fax: 406.656.6398 <a href="mailto:gelwell@hkminc.com">gelwell@hkminc.com</a>	Jim Darling MT Fish, Wildlife & Parks 1420 East Sixth Avenue Helena, MT 59601 Ph: 406.444.5334 <a href="mailto:jdarling@mt.gov">jdarling@mt.gov</a>
<b>Comments</b>		

# PUBLIC INFORMATION MEETING

CARTERSVILLE IRRIGATION DAM

FISH PASSAGE ALTERNATIVE ANALYSIS AND  
ENVIRONMENTAL ASSESSMENT

Montana Fish Wildlife and Parks

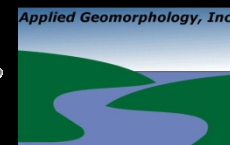
JULY 28, 2009



Team:



DOWL HKM





**Montana Historical Society  
State Historic Preservation Office  
September 11, 2009**

Rux, Julie

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**From:** Murdo, Damon [dmurdo@mt.gov]  
**Sent:** Friday, September 11, 2009 3:06 PM  
**To:** Elwell, Gary  
**Subject:** RE: Catersville Irrigation Dam Fish Passage Project



September 11, 2009

Gary Elwell  
DOWL HKM  
222 North 32<sup>nd</sup> Street, Suite 700  
Billings MT 59101

RE: CARTERSVILLE IRRIGATION DAM FISH PASSAGE PROJECT. SHP Project #: 2009091108

Dear Mr. Elwell:

I have conducted a cultural resource file search for the above-cited project located in Section 14, T6N R40E. According to our records there have been a few previously recorded sites within the designated search locale. Site 24RB1000 is the Cartersville Irrigation system which is eligible for listing on the National Register of Historic Places. In addition to the site there have been a few previously conducted cultural resource inventories done in the area. If you would like any further information regarding the site or reports you may contact me at the number listed below.

It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are to be altered and are over fifty years old we would recommend that they be recorded and a determination of their eligibility be made.

Based on the potential disturbance to the diversion dam required by this undertaking we feel that this project has the potential to impact cultural properties. We, therefore, recommend that a cultural resource inventory be conducted in order to determine whether or not sites exist and if they will be impacted.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at [dmurdo@mt.gov](mailto:dmurdo@mt.gov). Thank you for consulting with us.

Sincerely,

Damon Murdo  
Cultural Records Manager  
State Historic Preservation Office

File: MISC/CONSULTANTS/2009

# STATE HISTORIC PRESERVATION OFFICE

1410 8<sup>th</sup> Ave., P.O. Box 201202, Helena, MT 59620-1202

Phone: (406)-444-7767

Email: [dmurdo@mt.gov](mailto:dmurdo@mt.gov)

Attn: Damon Murdo

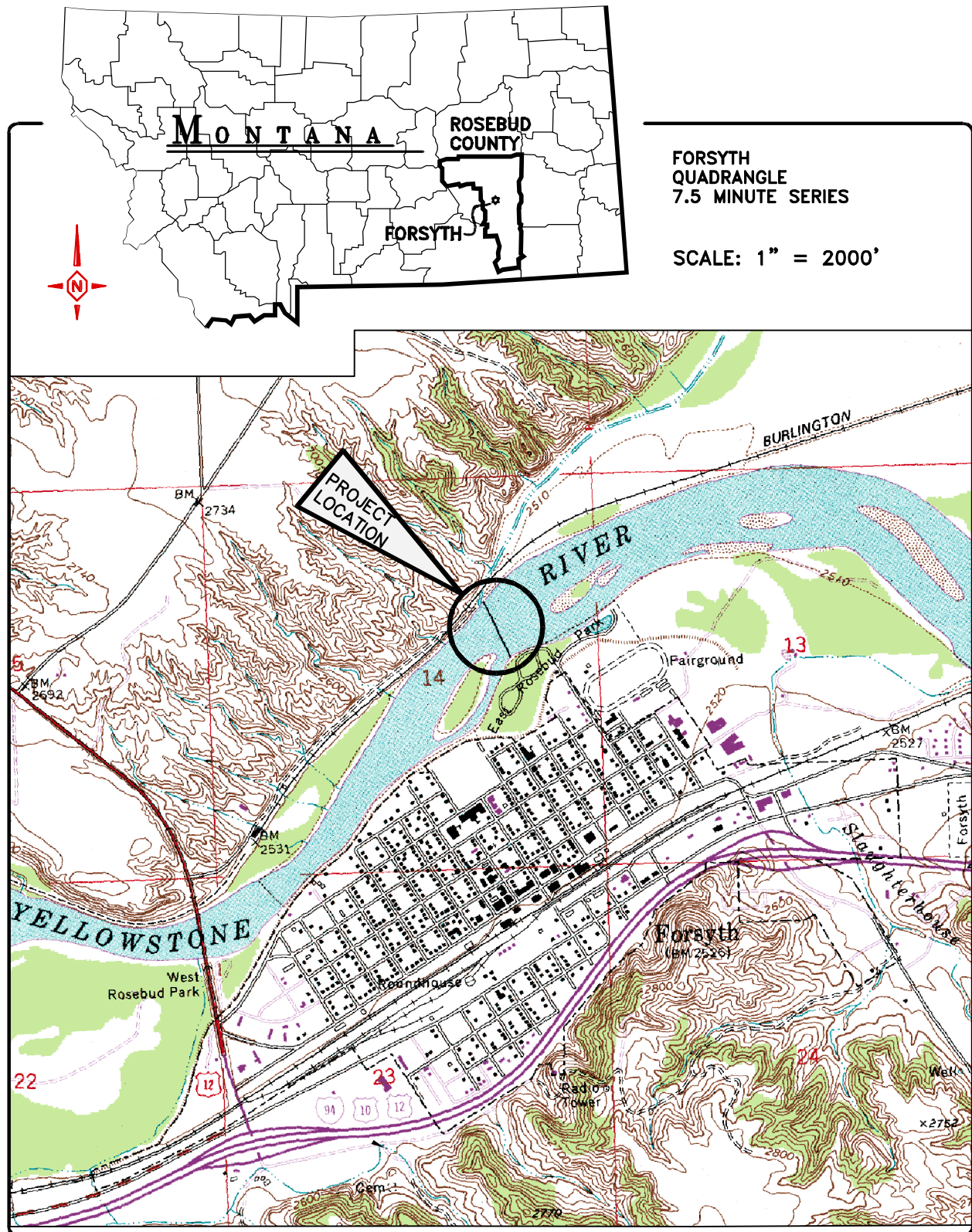
## File Search Request Form

*Please complete this form and attach a copy of the appropriate USGS Quad map showing the project location. All fields must be completed in order for your file search request to be processed. The form and accompanying map can be returned to the address above, emailed, or brought directly to the office.*

<b>Individuals Name</b>	Gary Elwell, PE		
<b>Organization (Agency/Company)</b>	DOWL HKM		
<b>Street</b>	222 North 32 <sup>nd</sup> Street, Suite 700		
<b>City</b>	Billings	<b>State:</b> MT	<b>Zip:</b> 59101
<b>Telephone #</b>	406-869-6310	<b>Fax:</b> 406-656-6398	
<b>Project Name</b>	Cartersville Irrigation Dam Fish Passage Project		
<b>Government Agency Involved</b>	Project being performed under contract with Montana Fish, Wildlife & Parks		
<b>Describe the project. Please identify any work that will involve ground disturbance, or the demolition and modification of existing buildings. If none of these are to occur, please indicate.</b>	Preparing a feasibility study and environmental assessment (EA) to identify preferred plan for modifying the Cartersville Irrigation Diversion Dam to allow for fish passage. The dam is owned and operated by the Cartersville Irrigation District.		
<b>Describe any previous disturbance and the current land use.</b>	The diversion dam was constructed in the early 1930's and consists of rock riprap capped with concrete. The dam requires annual maintenance including placement of additional rock.		
<b>Approximate date of proposed project initiation.</b>	Construction date unknown. Funds for construction have not yet been obtained.		
<b>Land Ownership (Private, State, Federal, etc.)</b>	Stream bottom owned by State of Montana		
<b>Remarks/ Special Requests</b>			

**Project Area Location Information (add on if necessary) Projects in cities also require TRS.**

TOWNSHIP	RANGE	SECTION	COUNTY
T6N	R40E	14	Rosebud



**LOCATION AND VICINITY MAP**  
**CARTERSVILLE IRRIGATION DAM FISH PASSAGE PROJECT**  
**FORSYTH, MONTANA**

**FIGURE #1**

**DOWL HKM**

26.10216.01

Sept. 2009

**Solicitation of Comments**  
**Invitation to Act as Cooperating Agency on EA**  
**Montana Department of Natural Resources and Conservation**  
**September 25, 2009**



# **Montana Fish, Wildlife & Parks**

P.O. Box 200701  
Helena, MT 59620-0701  
(406) 444-3186  
FAX: 406-444-4952  
Ref: DO386-09  
September 25, 2009

Mary Sexton, Director  
Montana Department of Natural Resources and Conservation  
1625 Eleventh Avenue  
Helena, MT 59620

Re: Cartersville Irrigation Dam Fish Passage Project  
Solicitation of Comments - Invitation to Act as Cooperating Agency on the Environmental  
Assessment

Dear Ms. Sexton:

Montana Fish, Wildlife & Parks (FWP) is in the process of evaluating the feasibility and cost of rehabilitating the Cartersville irrigation dam to provide fish passage to the upstream reaches of the Yellowstone River. DOWL HKM has been contracted by FWP to prepare a Feasibility Study and an Environmental Assessment (EA). The FWP is the lead state agency responsible for the preparation of the Montana Environmental Policy Act (MEPA) Environmental Assessment, which is required prior to any state action that may affect the human or physical environment. The FWP would like to invite the Department of Natural Resources and Conservation (DNRC) to act as a Cooperating Agency on this MEPA/National Environmental Policy Act (NEPA) document, due to your agency's permitting jurisdiction over this project. Please indicate whether this seems like a reasonable approach to streamline the environmental process for this project, by marking the appropriate line at the end of this letter, and returning it to our office.

No federal funds will be used for this study, however, a U.S. Army Corps of Engineers (USACE) Section 404 Permit will be required if the selected alternative requires placement of fill in the river. As such, the USACE will be the lead federal agency on this project. FWP has invited the USACE to act as a Cooperating Agency on this MEPA/NEPA document, in order to streamline their federal NEPA requirements associated with the permitting under Section 404 of the Clean Water Act.

## Project Overview

The Cartersville irrigation dam is located on the Yellowstone River at the town of Forsyth in Rosebud County, Montana (Figure 1). The legal description of the site is Sec 14, T 6N, R 40E. The dam is owned and operated by the Cartersville Irrigation District, which has associated water rights dating to the late 1800s. The condition of the dam has deteriorated since it was constructed in the early 1930s, and has required ongoing annual maintenance in recent years. The dam is made of rock-rubble riprap capped with concrete, and spans the entire channel of the Yellowstone River, over 800-ft in length. Currently, the dam acts as a fish passage barrier, particularly during periods of lower flows. (US Fish Wildlife Service (USFWS), Yellowstone River Coordinator's Office, Montana - Prairie Region)

## Project Purpose and Need

This dam has likely impeded the upstream migration of the shovelnose sturgeon and other fish species native to the Yellowstone River, since it was built in the early 1930s. (Bob Bramblett) There is another fish passage barrier approximately 135 miles downstream of the Cartersville dam (near Intake in Dawson County, Montana), however, the USACE is currently working on a project that will provide fish passage through that section of the river. Once that project is complete, the Cartersville dam will be the next barrier that precludes the upstream movement of the pallid sturgeon and other native fish species.

The overall intent of the project is to rehabilitate the dam to improve fish passage through this section of the Yellowstone River, while continuing to provide the water needed for the adjacent irrigation ditch.

The primary project objectives are:

1. Maintain the ability of the irrigation district to divert water at all water levels;
2. Allow upstream passage of native fishes, particularly sturgeon;
3. Provide minimal maintenance requirements;
4. Increase public safety, and
5. Maintain recreation opportunities at the adjacent city park.

#### Alternatives under Consideration

Initial alternatives were developed for this project as part of a two-day inter-agency planning process that was held February 25-26, 2009, resulting in a summary report called the "Cartersville Diversion Dam Project Study". The purpose of the study was to expand the existing list of project alternatives and prioritize them. Agencies and stakeholders represented at this two-day meeting included:

U.S. Fish and Wildlife Service (USFWS)  
U.S. Army Corp of Engineers (USACE)  
Montana Fish, Wildlife & Parks (FWP)  
Montana Department of Environmental Quality (DEQ)  
Natural Resource Conservation Service (NRCS)  
Yellowstone River Conservation District  
Cartersville Irrigation District  
Nature Conservancy

Through this process, several alternatives were chosen and prioritized as follows:

1. Stream bed reconfiguration (u-shaped)  
This variation of a rock ramp uses an inverted "u" configuration to re-grade the river to the current crest height. The center of the "u" would be constructed with a 0.3% slope and the edges would be constructed with a 0.15% slope.
2. Stream bed reconfiguration (boulder weir)  
This design uses a 1% slope with a 0.5 foot drop between weirs, resulting in a structure with 16 boulder rows, 25 feet between rows, and 400 feet long.
3. Controlled notch  
This would involve constructing a 200 foot long notch in the crest of the dam with an inflatable bladder dam. The inflatable dam would remain deflated most of the year to allow fish passage and inflated only when needed to provide water to the irrigators.

DNRC – Mary Sexton – DO386-09  
Cartersville Irrigation Dam Fish Passage Project -  
Solicitation of EA Comments  
September 25, 2009  
Page 3 of 4

4. Bypass channel; circumvent obstacles

With this design a rock channel spillway with boulder weirs would be constructed around the south end of the existing dam.

These alternatives, plus others developed during the feasibility study, will be addressed in the EA.

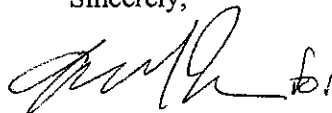
Request for Comments

With this letter, we are requesting comments and information relative to the permitting requirements and MEPA/NEPA documentation for this project. In addition, please identify any issues of concern regarding the alternatives that we intend on evaluating, or the potential environmental or socioeconomic impacts that could substantially delay or prevent your agency from granting a permit or other approval that is needed for the project. We currently plan to have a Draft EA for public and agency review by January 2010.

Please submit written comments to our consultant, DOWL HKM, at 222 N 32nd Avenue, Suite 700, Billings, MT 59101 (Attn: Gary Elwell, PE), or by e-mail (gelwell@hkminc.com). Please provide any initial written comments within thirty (30) calendar days from receipt of this letter.

If you have any questions regarding the project, you may contact Gary Elwell, PE of DOWL HKM at (406) 869-6310.

Sincerely,



Joe Maurier  
Director

Attachment: Figure 1

c: Pam Ash, Cartersville Irrigation District  
Brad Schmitz, Montana, Fish Wildlife & Parks  
Burt Williams, Nature Conservancy  
Gary Elwell, PE, DOWL HKM



DNRC – Mary Sexton – DO386-09  
Cartersville Irrigation Dam Fish Passage Project -  
Solicitation of EA Comments  
September 25, 2009  
Page 4 of 4

Please indicate the DNRC's response to the invitation to act as a Cooperating Agency on this EA, and return this page to: Montana Fish, Wildlife & Parks

Attn: Jim Darling  
P O Box 200701  
Helena MT 59620-0701

\_\_\_\_ The DNRC would like to act as a Cooperating Agency on this EA.

\_\_\_\_ The DNRC declines to act as a Cooperating Agency on this EA.

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Montana Department of Natural Resources and Conservation

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Date



**Solicitation of Comments**  
**Invitation to Act as Cooperating Agency on EA**  
**U.S. Army Corps of Engineers**  
**September 25, 2009**



# Montana Fish, Wildlife & Parks

P.O. Box 200701  
Helena, MT 59620-0701  
(406) 444-3186  
FAX: 406-444-4952  
Ref: DO38509  
September 25, 2009

Richard Oppen, Director  
Montana Department of Environmental Quality  
P O Box 200901 Avenue  
Helena, MT 59620-0901

Re: Cartersville Irrigation Dam Fish Passage Project  
Solicitation of Comments - Invitation to Act as Cooperating Agency on the Environmental  
Assessment

Dear Mr. Oppen:

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No federal funds will be used for this study, however, a U.S. Army Corps of Engineers (USACE) Section 404 Permit will be required if the selected alternative requires placement of fill in the river. As such, the USACE will be the lead federal agency on this project. FWP has invited the USACE to act as a Cooperating Agency on this MEPA/NEPA document, in order to streamline their federal NEPA requirements associated with the permitting under Section 404 of the Clean Water Act.

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through that section of the river. Once that project is complete, the Cartersville dam will be the next barrier that precludes the upstream movement of the pallid sturgeon and other native fish species.

The overall intent of the project is to rehabilitate the dam to improve fish passage through this section of the Yellowstone River, while continuing to provide the water needed for the adjacent irrigation ditch.

The primary project objectives are:

1. Maintain the ability of the irrigation district to divert water at all water levels;
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5. Maintain recreation opportunities at the adjacent city park.

#### Alternatives under Consideration

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Yellowstone River Conservation District  
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3. Controlled notch  
This would involve constructing a 200 foot long notch in the crest of the dam with an inflatable bladder dam. The inflatable dam would remain deflated most of the year to allow fish passage and inflated only when needed to provide water to the irrigators.
4. Bypass channel; circumvent obstacles  
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DEQ -Oppert - DO385-09  
Cartersville Irrigation Dam Fish Passage Project -  
Solicitation of EA Comments  
September 25, 2009  
Page 3 of 4

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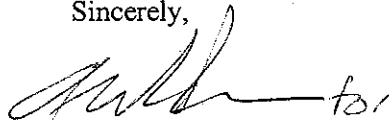
Request for Comments

With this letter, we are requesting comments and information relative to the permitting requirements and MEPA/NEPA documentation for this project. In addition, please identify any issues of concern regarding the alternatives that we intend on evaluating, or the potential environmental or socioeconomic impacts that could substantially delay or prevent your agency from granting a permit or other approval that is needed for the project. We currently plan to have a Draft EA for public and agency review by January 2010.

Please submit written comments to our consultant, DOWL HKM, at 222 N 32nd Avenue, Suite 700, Billings, MT 59101 (Attn: Gary Elwell, PE), or by e-mail (gelwell@hkminc.com). Please provide any initial written comments within thirty (30) calendar days from receipt of this letter.

If you have any questions regarding the project, you may contact Gary Elwell, PE of DOWL HKM at (406) 869-6310.

Sincerely,

A handwritten signature in dark ink, appearing to read "Joe Maurier", with a stylized flourish at the end.

Joe Maurier  
Director

Attachment: Figure 1

c: Pam Ash, Cartersville Irrigation District  
Brad Schmitz, Montana, Fish Wildlife & Parks  
Burt Williams, Nature Conservancy  
Gary Elwell, PE, DOWL HKM

DEQ -Oppen - DO385-09  
Cartersville Irrigation Dam Fish Passage Project -  
Solicitation of EA Comments  
September 25, 2009  
Page 4 of 4

Please indicate the DEQ's response to the invitation to act as a Cooperating Agency on this EA,  
and return this page to:

Montana Fish, Wildlife & Parks  
Attn: Jim Darling  
P O Box 200701  
Helena MT 59620-0701

\_\_\_ The DEQ would like to act as a Cooperating Agency on this EA.

\_\_\_ The DEQ declines to act as a Cooperating Agency on this EA.

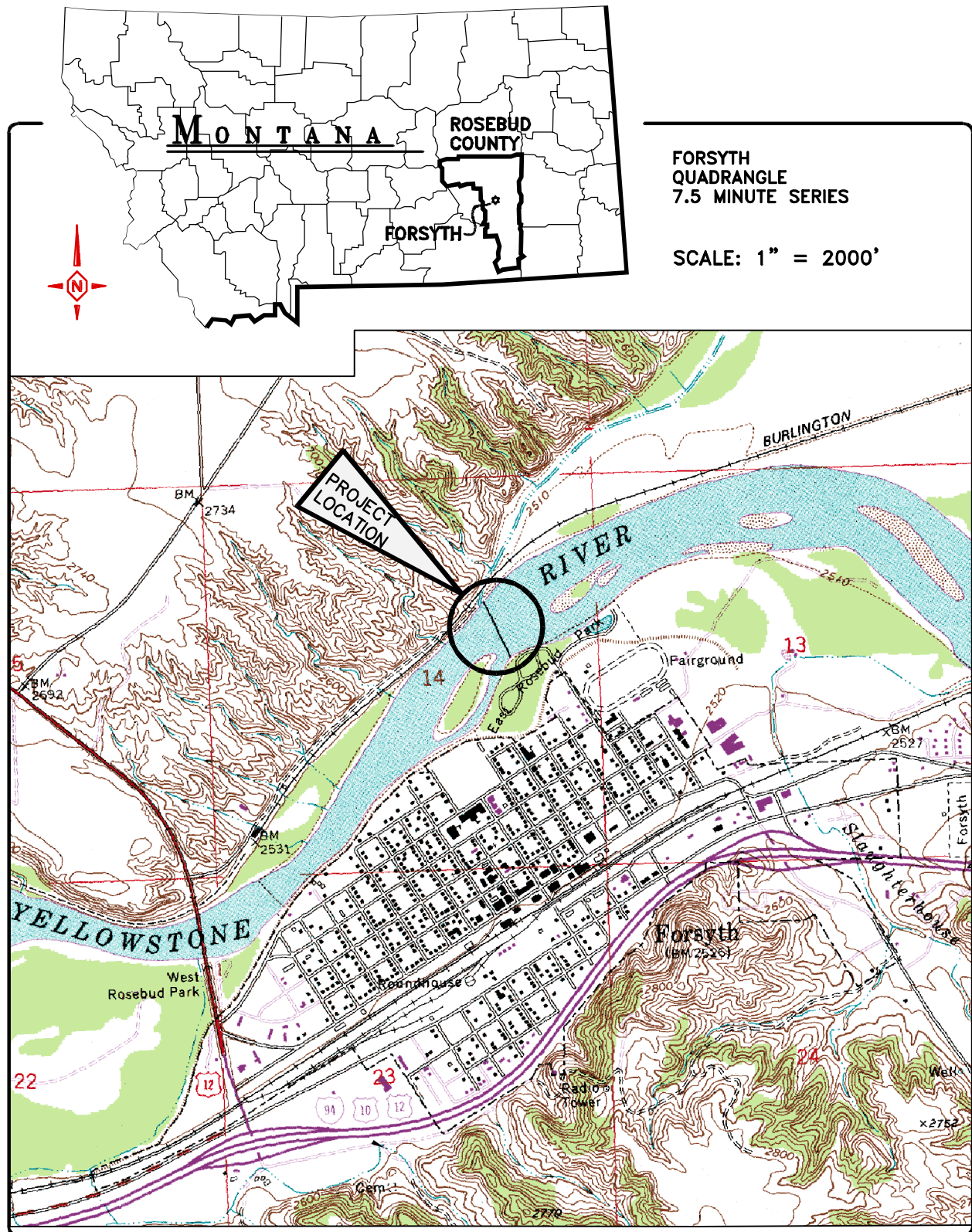
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Montana Department of Environmental Quality

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Date





**LOCATION AND VICINITY MAP**  
**CARTERSVILLE IRRIGATION DAM FISH PASSAGE PROJECT**  
**FORSYTH, MONTANA**

**FIGURE #1**

**DOWL HKM**

26.10216.01

Sept. 2009



**Elwell, Gary**

---

**From:** Elwell, Gary  
**Sent:** Wednesday, September 30, 2009 11:15 AM  
**To:** 'tellerhoff@mt.gov'  
**Subject:** Cartersville  
**Attachments:** deq cartersville\_20090930110538.pdf

Tom

Attached is a scan of the letter from FWP you requested.

Gary Elwell ,PE



222 N 32nd Street  
Suite 700  
Billings, MT 59101-1911  
Fax 406-656-6398  
DID 406-869-6310  
[www.dowlhkm.com](http://www.dowlhkm.com)

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**Solicitation of Comments**  
**Invitation to Act as Cooperating Agency on EA**  
**Montana Department of Environmental Quality**  
**September 25, 2009**



## **Montana Fish, Wildlife & Parks**

P.O. Box 200701  
Helena, MT 59620-0701  
(406) 444-3186  
FAX: 406-444-4952  
Ref: DO387-09  
September 25, 2009

Todd Tillinger  
U.S. Army Corps of Engineers  
10 West 15th Street  
Suite 220  
Helena, MT 59626

Re: Cartersville Irrigation Dam Fish Passage Project  
Solicitation of Comments - Invitation to Act as Cooperating Agency on the Environmental  
Assessment

Dear Mr. Tillinger:

Montana Fish, Wildlife & Parks (FWP) is in the process of evaluating the feasibility and cost of rehabilitating the Cartersville irrigation dam to provide fish passage to the upstream reaches of the Yellowstone River. DOWL HKM has been contracted by FWP to prepare a Feasibility Study and an Environmental Assessment (EA). The FWP is the lead state agency responsible for the preparation of the Montana Environmental Policy Act (MEPA) Environmental Assessment, which is required prior to any state action that may affect the human or physical environment. The FWP has invited the Department of Environmental Quality (DEQ) and the Department of Natural Resources and Conservation (DNRC) to act as Cooperating Agencies on this EA.

No federal funds will be used for this study, however, a U.S. Army Corps of Engineers (USACE) Section 404 Permit will be required if the selected alternative requires placement of fill in the river. As such, the USACE will be the lead federal agency on this project. FWP would like to invite the USACE to act as a formal Cooperating Agency on this National Environmental Policy Act (NEPA) document, in order to assist with your agency's federal NEPA requirements associated with future Section 404 permitting. Please indicate whether this seems like a reasonable approach to streamline the environmental process for this project, by marking the appropriate line at the end of this letter, and returning it to our office. We intend to work closely with you to ensure that our EA includes all of the information necessary to fulfill the USACE NEPA requirements.

### Project Overview

The Cartersville irrigation dam is located on the Yellowstone River at the town of Forsyth in Rosebud County, Montana (Figure 1). The legal description of the site is Sec 14, T 6N, R 40E. The dam is owned and operated by the Cartersville Irrigation District, which has associated water rights dating to the late 1800s. The condition of the dam has deteriorated since it was constructed in the early 1930s and has required ongoing annual maintenance in recent years. The dam is made of rock-rubble riprap capped with concrete, and spans the entire channel of the Yellowstone River, over 800-ft in length. Currently, the dam

acts as a fish passage barrier, particularly during periods of lower flows. [US Fish Wildlife Service (USFWS), Yellowstone River Coordinator's Office, Montana – Prairie Region.]

#### Project Purpose and Need

This dam has likely impeded the upstream migration of the shovelnose sturgeon and other fish species native to the Yellowstone River, since it was built in the early 1930s. (Bob Bramblett) There is another fish passage barrier approximately 135 miles downstream of the Cartersville dam (near Intake in Dawson County, Montana), however, the U.S. Army Corps of Engineers is currently working on a project that will provide fish passage through that section of the river. Once that project is complete, the Cartersville Dam will be the next barrier that precludes the upstream movement of the pallid sturgeon and other native fish species.

The overall intent of the project is to rehabilitate the dam to improve fish passage through this section of the Yellowstone River, while continuing to provide the water needed for the adjacent irrigation ditch.

The primary project objectives are:

1. Maintain the ability of the irrigation district to divert water at all water levels;
2. Allow upstream passage of native fishes, particularly sturgeon;
3. Provide minimal maintenance requirements;
4. Increase public safety, and
5. Maintain recreation opportunities at the adjacent city park.

#### Alternatives Under Consideration

Initial alternatives were developed for this project as part of a two-day inter-agency planning process that was held February 25-26, 2009, resulting in a summary report called the "Cartersville Diversion Dam Project Study". The purpose of the study was to expand the existing list of project alternatives and prioritize them. Agencies and stakeholders represented at this two-day meeting included:

U.S. Fish and Wildlife Service (USFWS)  
U.S. Army Corp of Engineers (USACE)  
Montana Fish, Wildlife & Parks (FWP)  
Montana Department of Environmental Quality (DEQ)  
Natural Resource Conservation Service (NRCS)  
Yellowstone River Conservation District  
Cartersville Irrigation District  
Nature Conservancy

Through this process, several alternatives were chosen and prioritized as follows:

1. Stream bed reconfiguration (u-shaped)  
This variation of a rock ramp uses an inverted "u" configuration to re-grade the river to the current crest height. The center of the "u" would be constructed with a 0.3% slope and the edges would be constructed with a 0.15% slope.
2. Stream bed reconfiguration (boulder weir)  
This design uses a 1% slope with a 0.5 foot drop between weirs, resulting in a structure with 16 boulder rows, 25 feet between rows, and 400 feet long.

3. Controlled notch

This would involve constructing a 200 foot long notch in the crest of the dam with an inflatable bladder dam. The inflatable dam would remain deflated most of the year to allow fish passage and inflated only when needed to provide water to the irrigators.

4. Bypass channel; circumvent obstacles

With this design a rock channel spillway with boulder weirs would be constructed around the south end of the existing dam.

These alternatives, plus others developed during the feasibility study, will be addressed in the EA.

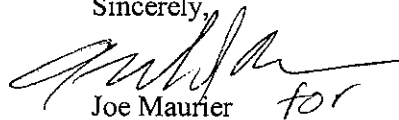
Request for Comments

With this letter, we are requesting comments and information relative to the permitting requirements and MEPA/NEPA documentation for this project. In addition, please identify any issues of concern regarding the alternatives that we intend on evaluating, or the potential environmental or socioeconomic impacts that could substantially delay or prevent your agency from granting a permit or other approval that is needed for the project. We currently plan to have a Draft EA for public and agency review by January 2010.

Please submit written comments to our consultant, DOWL HKM, at 222 N 32nd Avenue, Suite 700, Billings, MT 59101 (Attn: Gary Elwell, PE), or by e-mail (gelwell@hkminc.com). Please provide any initial written comments within thirty (30) calendar days from receipt of this letter.

If you have any questions regarding the project, you may contact Gary Elwell, PE of DOWL HKM at (406) 869-6310.

Sincerely,

  
Joe Maurier  
Director

Attachment: Figure 1

c: Greg Johnson, COE, Omaha  
Pam Ash, Cartersville Irrigation District  
Brad Schmitz, Montana Fish, Wildlife & Parks  
Burt Williams, Nature Conservancy  
Gary Elwell, PE, DOWL HKM

COE - Tillinger – DO387-09  
Cartersville Irrigation Dam Fish Project –  
Solicitation of EA Comments  
September 25, 2009  
Page 4 of 4

Please indicate the USACE's response to the invitation to act as a Cooperating Agency on this EA, and return this page to:

MT Fish, Wildlife & Parks  
Attn: Jim Darling  
P. O. Box 200701  
Helena MT 59620-0701

\_\_\_ The USACE would like to act as a Cooperating Agency on this EA.

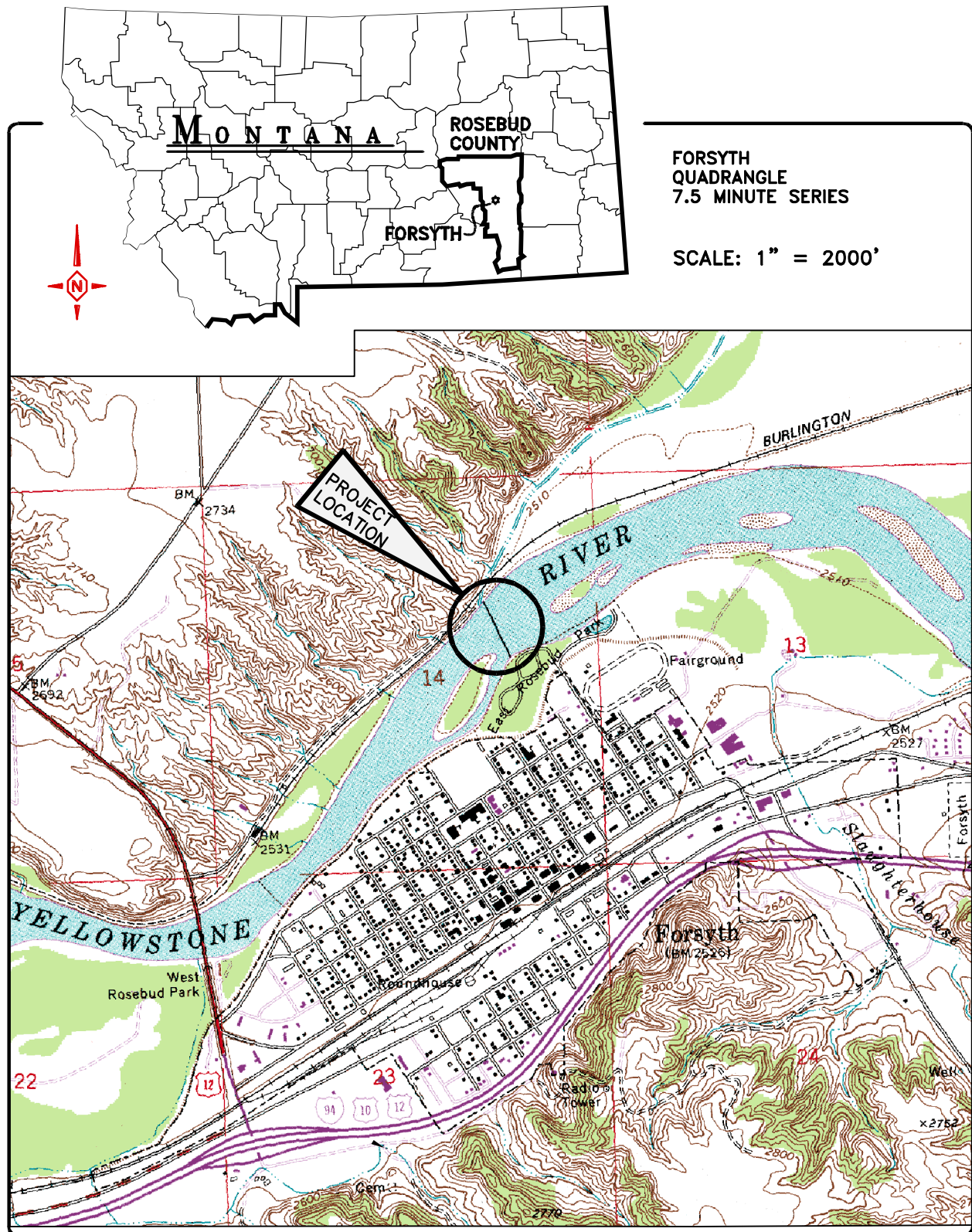
\_\_\_ The USACE declines to act as a Cooperating Agency on this EA.

---

U.S. Army Corps of Engineers

---

Date



**LOCATION AND VICINITY MAP**  
**CARTERSVILLE IRRIGATION DAM FISH PASSAGE PROJECT**  
**FORSYTH, MONTANA**

**FIGURE #1**

**DOWL HKM**

26.10216.01

Sept. 2009

**Letters to Cartersville Irrigation District  
September 28, 2009**





September 28, 2009

h:\26\10216\correspondence\pamashltr.docx

Ms. Pam Ash  
Cartersville Irrigation District  
P.O. Box 668  
Forsyth, MT 59327

RE: Cartersville Irrigation Dam

Dear Pam:

We have not received any comments from the irrigators except those received during our meeting in Forsyth on July 28, 2009. Attached is a copy of the attendance list and comments received at that meeting. We are well into our study; however, we would still appreciate any additional comments from the irrigators and/or other interested parties regarding this study.

We have completed our underwater surveys at the dam site and I have included a copy for your use in deciding what immediate action you feel is necessary to protect the dam. Notice that a significant hole has developed immediately below the dam.

If you have any questions, please call.

Sincerely,

DOWL HKM

Gary E. Elwell, P.E.

Enclosures

cc: ♦Jack Ferguson, CID, 120 Route 446, Rosebud, MT 59347  
♦Kirk Montgomery, CID, 92 Route 446, Rosebud, MT 59347  
Jim Darling, MT FWP, 1420 East Sixth Avenue, Helena, MT 59601  
Brad Schmitz, MT FWP, P.O. Box 1630, Miles City, MT 59301  
Burt Williams, Nature Conservancy, 2721 2<sup>nd</sup> Avenue N. #310, Billings, MT 59101  
Don Youngbauer, Yellowstone R. Conservation District Council, P.O. Box 68, Forsyth, MT 59327

**Department of Environmental Quality**  
**October 7, 2009**



Montana Department of  
**ENVIRONMENTAL QUALITY**

RECEIVED  
OCT 09 2009

Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • [www.deq.mt.gov](http://www.deq.mt.gov)

October 7, 2009

Joe Maurier, Director  
Montana Fish, Wildlife and Parks  
P.O. Box 200701  
Helena, MT 59620-0701

Re: Cartersville Irrigation Dam Fish Passage Project

Dear Mr. <sup>Joe</sup>Maurier:

The Department of Environmental Quality (DEQ) is part of the interagency group working on the Intake fish passage project, and will be more than happy to participate in the process of evaluating the feasibility and cost of rehabilitating the Cartersville irrigation dam on the Yellowstone River at Forsyth, MT, for fish passage to the upper reaches of the river.

DEQ's primary concerns involve the possible need for a 318 Authorization for short-term water quality standards for turbidity, a 401 Certification for a federal 404 Permit from the Corps of Engineers, and a possible Storm Water Discharge Permit for construction activity.

Please direct future requests for DEQ participation to Jeff Ryan, Water Protection Bureau (406-444-4626 or [jeryan@mt.gov](mailto:jeryan@mt.gov)) and Greg Hallsten, DEQ Montana Environmental Policy Act Unit (406-444-3276 or [ghallsten@mt.gov](mailto:ghallsten@mt.gov)).

Sincerely,

Richard H. Opper  
Director

c: G. Elwell, PE, DOWL HKM  
Judy Hanson, DEQ  
Jenny Chambers, DEQ

**Department of the Army  
Corps of Engineers, Omaha District  
October 19, 2009**



REPLY TO  
ATTENTION OF

6007 02 129  
DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, OMAHA DISTRICT  
BILLINGS REGULATORY OFFICE  
2602 FIRST AVENUE NORTH, SUITE 309  
POST OFFICE BOX 2256  
BILLINGS, MONTANA 59103-2256

October 19, 2009

Regulatory Branch  
Montana State Program  
Corps No. NWO-2009-02424-MTB

Subject: Cartersville Irrigation Dam Fish Passage Project

DOWL HKM  
Attn: Gary Elwell, PE  
222 North 32<sup>nd</sup> Avenue, Suite 700  
Billings, Montana 59101

Dear Mr. Elwell:

Reference is made to your letter requesting comments on behalf of Montana Fish, Wildlife, & Parks regarding the proposed project to improve fish passage at the Cartersville Irrigation Dam located in Sections 26 and 35, Township 36 North, Range 32 East; Section 14, Township 6 North, Range 40 East, in Rosebud County, Montana.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material into waters of the United States. Waters of the United States include the area below the ordinary high water mark of stream channels and lakes or ponds connected to the tributary system, and wetlands adjacent to these waters. Isolated waters and wetlands, as well as man-made channels and ditches, may be waters of the United States, which must be determined on a case-by-case basis. Under the authority of Section 10 of the Rivers and Harbors Act, Department of the Army permits are required for structures or work in, over, under or affecting navigable waters of the United States.

This office agrees to be a Cooperating Agency on the Environmental Assessment for this project. If you have any questions, please call me at (406) 657-5910, or Todd Tillinger at (406) 441-1375 and reference File No. NWO-2009-02424-MTB.

A copy of this letter will be sent to Jim Darling, MT Fish, Wildlife, & Parks, PO Box 200701, Helena, MT 59620-0701.

Sincerely,

Cathy Juhas  
Project Manager

Enclosure

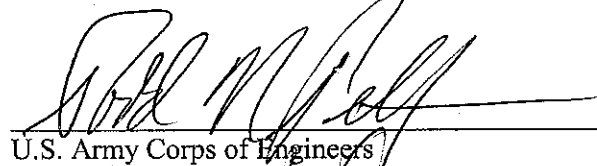
COE - Tillinger - DO387-09  
Cartersville Irrigation Dam Fish Project -  
Solicitation of EA Comments  
September 25, 2009  
Page 4 of 4

Please indicate the USACE's response to the invitation to act as a Cooperating Agency on this EA, and return this page to:

MT Fish, Wildlife & Parks  
Attn: Jim Darling  
P. O. Box 200701  
Helena MT 59620-0701

☒ The USACE would like to act as a Cooperating Agency on this EA.

☐ The USACE declines to act as a Cooperating Agency on this EA.

  
U.S. Army Corps of Engineers

01 Oct 2009  
Date

TODD N. TILLINGER

**Public Information Meeting**  
**November 3, 2009**

# PUBLIC INFORMATION MEETING

CARTERSVILLE IRRIGATION DAM

FISH PASSAGE ALTERNATIVE ANALYSIS AND  
ENVIRONMENTAL ASSESSMENT

Montana Fish Wildlife and Parks

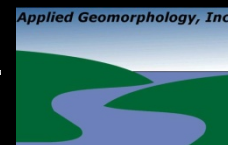
NOVEMBER 3, 2009



Team:



DOWL HKM





**Billings Gazette**  
**November 8, 2009**

# Preliminary work advances on fish passage

By BRETT FRENCH  
Of The Gazette Staff

The work may be years off, but state and federal governments are looking into ways to create fish passage at Cartersville Diversion Dam on the Yellowstone River near Forsyth.

"The goal is to have a report and draft environmental assessment by January and then we'll move ahead," said Jim Darling, fisheries habitat section supervisor for Montana Fish, Wildlife and Parks.

FWP is partnering with the U.S. Fish and Wildlife Service's Yellowstone River coordinator and the U.S. Army Corps of Engineers. The Corps is already at work on a similar project downstream from Forsyth to rebuild the Intake Dam to allow fish passage.

## The push for passage

The push to create fish passage is largely driven by the fact that pallid sturgeon, an endangered species, is believed to need more upstream access for its offspring to live. After pallid sturgeon eggs hatch, the larvae drift downstream anywhere from 150 to 300 miles.

Right now, the theory is that the tiny pallids are floating into Lake Sakakawea in North Dakota and being eaten by other fish or dying in the stagnant waters. As a result, wild

*"The intent of constructing this rock ramp structure is to resemble areas where fish have been able to pass in the past. We'd get rid of the steep drop at the existing diversion dam and replace it with a gradual slope."*

— Gary Elwell

Dowl HKM water resource engineer

hatches of pallid sturgeon have not been documented on the Yellowstone River. Estimates put the number of wild pallid sturgeon in the Yellowstone and the upper Missouri River at only 150 fish. Without successful reproduction, wild pallids in the Yellowstone and Missouri dams may be extinct by 2017, although hatchery-raised fish have been released.

Opening up the Intake Diversion Dam to fish passage would allow the sturgeon another 165 miles of upstream access. That's where they'd hit the Cartersville Diversion Dam. If the Cartersville Dam is fish-friendly, fish could move another 40 miles upstream before reaching the Yellowstone Diversion Dam. In all, there are six diversion dams between Billings and Glendive. Of the four above Cartersville, only Huntley has a side channel for fish passage.

The three others, since they are low, may be navigable to fish in high water.

"From a pallid standpoint, our real priorities are Intake and Cartersville," said George Jordan, Yellowstone River coordinator for the U.S. Fish and Wildlife Service. "I think cumulatively the two would then open up the historic range of pallids on the Yellowstone River."

Making the dams fish-friendly would also aid six Montana species of special concern, including the shovelnose sturgeon, blue sucker and sicklefin chub.

## Preliminary design

FWP hired Dowl HKM engineers in Billings to draw up options for creating fish passage at Cartersville. The project was funded with a \$110,000 appropriation from the Legislature. Dowl HKM water resource engineer

Gary Elwell is leading the project's preliminary design.

Elwell and Darling said the Cartersville project would be able to draw upon the engineering work at Intake Diversion Dam, with the preference being a gradual rock ramp that resembles a natural river riffle.

"The intent of constructing this rock ramp structure is to resemble areas where fish have been able to pass in the past," Elwell said. "We'd get rid of the steep drop at the existing diversion dam and replace it with a gradual slope."

That slope could extend as much as 1,000 feet downstream, he said. But it wouldn't alter the flow of water to the southern side channel that feeds the fishing access site at Forsyth. The river is 800 feet wide at the dam site with the northern channel carrying more water.

The dam, owned by the Cartersville Irrigation District, was built during the early 1930s with rock capped by concrete. The dam spans the entire river. Irrigation district members met with FWP and the U.S. Fish and Wildlife Service earlier in the spring to hammer out concerns and agree on design possibilities, Jordan said.

## Calming fears

Elwell spoke to a crowd of about 40 Forsyth-area folks on Tuesday outlining the scenarios. Some

Forsyth residents got nervous when rumor circulated that FWP would close the area below the dam to fishing if a bypass channel is created. There is a popular fishing access site at a park just below the dam on the south side of the river, which includes a boat ramp. But Darling said closing that portion of the river to fishing is not the agency's intent.

"Well, I feel a little better and we got to voice our concerns and fears," said Robert Vannattan, of Forsyth, who attended the meeting. "We all came to the same agreement that a (rock) ramp or something may work."

It could take years for any recommendation to wind through the state and federal bureaucracy, and then funding would have to be acquired. So any deal is a long way from being done.

However, Sen. Jon Tester has requested \$3 million for the dam project in the Energy and Water Development Subcommittee. Darling and Jordan said some of the money could also come from the Water Resources Development Act.

"If and when both projects are designed, funded and implemented, it will be a large benefit to fish species on the lower Yellowstone," Jordan said.

Contact Brett French at french@billingsgazette.com or at 657-1387.

**Response from  
Montana Department of Natural Resources and Conservation  
November 13, 2009**

**Rux, Julie**

---

**From:** Dalby, Chuck [cdalby@mt.gov]  
**Sent:** Tuesday, November 17, 2009 11:08 AM  
**To:** Schultz, Tom (DNR); Siroky, Laurence; McLaughlin, Terri  
**Cc:** Azevedo, Paul; Kerbel, Keith; Darling, Jim; Elwell, Gary  
**Subject:** FW: Invitation to act as a Cooperating Agency  
**Attachments:** DNRC ltr.PDF

Hello,

DNRC is participating in a Feasibility Study/Environmental Assessment of the Cartersville Irrigation Dam/Fish Passage Project near Forsyth. DFWP is the lead state agency responsible for preparation of the MEPA-EA. At this point I am seeking comments on DNRC's jurisdiction, permitting authority, and issues specific to our regulatory role in the project.

I sincerely appreciate your forwarding this email and the attached memo, which describes the project, to appropriate staff for their insights and recommendations on permitting actions/issues as may be required by:

1. Montana Water Use Act (Water Rights/Change Authorization—my impression is that no permits will be required ?);
2. Montana Land-Use License or Easement on Navigable Waters (permits required ?);
3. Dam Safety and/or Floodplain and Floodway Management (permits required ?).

Because we have engaged in this process somewhat late, and the anticipated completion date for the draft Feasibility Study/EA is December 31, 2010, I would appreciate a response by the end of this week (Nov. 20) if possible.

Please contact me if you have any questions about the project.

Thanks,  
Chuck

**Chuck Dalby**  
**Hydrologist**  
**DNRC-WRD**  
**1424 9th Ave, PO 201601**  
**Helena, MT 59620-1601**  
**(406-444-6644)**

---

**From:** Sexton, Mary  
**Sent:** Friday, November 13, 2009 13:39  
**To:** Darling, Jim  
**Cc:** Zackheim, Karen; Elwell Gary (E-mail); Dalby, Chuck; Azevedo, Paul; Schultz, Tom (DNR)  
**Subject:** RE: Invitation to act as a Cooperating Agency

Jim,

Chuck Dalby will be taking the lead. He'll be contacting you regarding process and needed documents. Thanks for the reminder!

Mary

Mary Sexton

**Billings Gazette**  
**December 15, 2009**



## Intake Dam plan would affect water, livelihoods

**Posted: Tuesday, December 15, 2009 12:00 am**

Plans for Intake Dam should be a concern for all of us who live in Dawson and Richland counties. The deadline has been extended to Dec. 31 to call or write letters to the Corps of Engineers, P.O. Box 2256, Billings, MT 59103, or call Cathy Juhas at 406-657-5910 with your concerns and objections in regards to reconstruction of the Intake Dam pertaining to the proposal of installing a rock ramp at the dam site for a passageway for the pallid sturgeon.

An article appeared in the Nov. 15 Ranger Review stating that the state and federal officials are considering ways to create a fish passage at the Carterville diversion dam on the Yellowstone River near Forsyth to help the pallid sturgeon fish. This will have a great impact on agriculture (irrigation), recreation, historical tourism and the Yellowstone Caviar Program that provides grants for many community projects from the paddlefish that are snagged at the Intake Dam. Are they perhaps destroying this program with the paddlefish in order to save the pallid sturgeon? We at least eat the paddlefish, but the pallid sturgeon is useless.

We are in danger of losing our water and livelihoods if this takes place, plus all the money that will be wasted. This money could be spent in a more reasonable way — like improving health care! George and I have lived on an irrigated farm for 50-plus years. The dam has served the community well for over 100 years, and it doesn't have to be messed with because of a fish.

**Jenny Rice**

**Glendive**

**Solicitation of Comments for MEPA/NEPA Document  
Informal Endangered Species Act Section 7 Consultation  
December 21, 2009**



December 21, 2009

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Lou Hanebury  
U.S. Fish and Wildlife Service  
2900 4<sup>th</sup> Avenue N, Room 301  
Billings, MT 59101

Re: Cartersville Irrigation Dam Fish Passage Improvements Project

Subject: Solicitation of Comments for MEPA / NEPA document  
Informal Endangered Species Act Section 7 Consultation

Dear Mr. Hanebury:

The Montana Department of Fish, Wildlife and Parks (DFWP) is in the process of evaluating the feasibility and cost of rehabilitating the Cartersville irrigation dam to provide fish passage to the upstream reaches of the Yellowstone River. DOWL HKM has been contracted by DFWP to prepare a Feasibility Study, including a more detailed alternatives analysis, including cost for each alternative, and the Environmental Assessment. The DFWP is the lead state agency responsible for the preparation of the Montana Environmental Policy Act (MEPA)

Environmental Assessment, which is required prior to any state action that may affect the human or physical environment. No federal funds have been designated for this project, although a U.S. Army Corps of Engineers (USACE) Section 404 Permit will be required for placement of fill in the river. The USACE is a cooperating agency on this project.

The Cartersville irrigation dam is located on the Yellowstone River at the town of Forsyth in Rosebud County, Montana (Figure 1). The legal description of the site is Sec 14, T 67N, R 40E. The dam is owned and operated by the Cartersville Irrigation District, which has associated water rights dating to the late 1800's. The condition of the dam has deteriorated since it was constructed in the early 1930's, and has required ongoing annual maintenance in recent years. The dam is made of rock-rubble riprap capped with concrete, and spans the entire channel of the Yellowstone River, over 800-ft in length. Currently, the dam acts as a fish passage barrier, particularly during periods of lower flows.



### **Project Purpose and Need**

This dam has likely impeded the upstream migration of the Pallid Sturgeon (*Scaphirhynchus albus*), an endangered species, and other fish species native to the Yellowstone River, since it was built in the early 1930's. There is another fish passage downstream of the Cartersville dam (near Intake in Dawson County, Montana), however, the U.S. Army Corps of Engineers is currently working on a project that will provide fish passage through that section of the river. Once that project is complete, the Cartersville dam will be the next barrier that precludes the upstream movement of the Pallid Sturgeon and other native fish species.

The overall intent of the project is to rehabilitate the dam to improve fish passage through this section of the Yellowstone River, while continuing to provide the water needed for the adjacent irrigation ditch.

The primary project objectives are:

1. Maintain the ability of the irrigation district to divert water at all water levels
2. Allow upstream passage of native fishes, particularly sturgeon
3. Provide minimal maintenance requirements
4. Increase public safety
5. Maintain recreation opportunities at adjacent City park

### **Alternatives Under Consideration**

Initial alternatives were developed for this project as part of a 2-day inter-agency planning process that was held February 25-26, 2009, resulting in a summary report called the "Cartersville Diversion Dam Project Study". The purpose of the study was to expand the existing list of project alternatives and prioritize them. Agencies and stakeholders represented at this 2-day meeting included:

U.S. Fish and Wildlife Service (USFWS)  
U.S. Army Corp of Engineers (USACE)  
Montana Department of Fish, Wildlife, and Parks (DFWP)  
Montana Department of Environmental Quality (DEQ)  
Natural Resource Conservation Service (NRCS)  
Yellowstone River Conservation District  
Cartersville Irrigation District  
Nature Conservancy

Through this process, several alternatives were chosen and prioritized as follows:

#### **1. Notch in Concrete Dam Controlled by Inflatable Bladder**

A natural channel exists to the south of a large, well-established island that extends approximately 2,000 feet upstream from the dam. Lateral channel migration is prohibited by a large earthen dike to the south and the island bank to the north.

This alternative would construct a 200-ft long notch in the crest of dam with an inflatable bladder dam to create head for diverting water into the slough to allow fish passage most of year and intermittently at lowest flow conditions.

## **2. Engineered Fishway Bypass Channel**

This alternative would open the south channel to fish passage by connecting the east end of the island to the existing dam, and removing a section of the dam at the southern terminus, to allow a natural gradient channel through that area.

## **3. Rock Ramp**

Under this alternative, the streambed would be reconfigured through either a U-shaped configuration or a boulder weir to reduce the channel gradient downstream from the existing diversion dam.

## **4. Partial Diversion Dam**

This alternative would replace the existing diversion structure with a partial span diversion dam, creating a relatively natural gradient open channel on the southern side of the river.

## **5. Island – South Channel Passage**

This alternative would open up the south channel to fish passage by connecting the east end of the island wall to the existing dam, and removing the southernmost portion of the dam.

## **6. Raceway Notch Fish Passage**

This alternative would construct a passage channel through the dam with continuous gradient that meets minimum swim criteria, and allows control of flow through the notch.

A copy of the report containing more detailed information about each of these alternatives can be sent to you, upon request.

An additional alternative would be to remove the dam and either move the intake for the irrigation ditch further upstream and use pumps to get the water to the ditch, or buy out the irrigators. This alternative involves some rather complicated issues, and is unlikely to be carried forward, however, it will likely be covered in the EA as an alternative that was considered for this project.

## **Request for Comments and Information re: Threatened and Endangered Species**

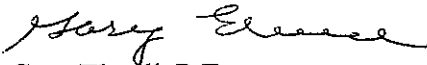
Your organization has been identified as an agency that may have an interest in the project due to potential permitting involvement or other agency jurisdiction. With this letter, we are requesting comments and information relative to the permitting requirements and MEPA/NEPA documentation for this project, as well as information regarding known threatened or endangered species that may occur in the project area. In addition, please identify any issues of concern regarding the alternatives that we intend on evaluating, or the potential environmental or socioeconomic impacts that could substantially delay any necessary Section 7 Consultation that is needed for the project. We currently plan to have a Draft EA for public and agency review by January 2010.

Mr. Lou Hanebury  
December 21, 2009  
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Please submit written comments to our consultant, DOWL HKM, at 222 N 32nd Avenue, Suite 700, Billings, MT 59101 (Attn: Gary Elwell), or by e-mail ([gelwell@hkminc.com](mailto:gelwell@hkminc.com)). Please provide any initial written comments within thirty (30) calendar days from receipt of this letter.

If you have any questions regarding the project, you may contact Gary Elwell of DOWL HKM at (406) 656-6399.

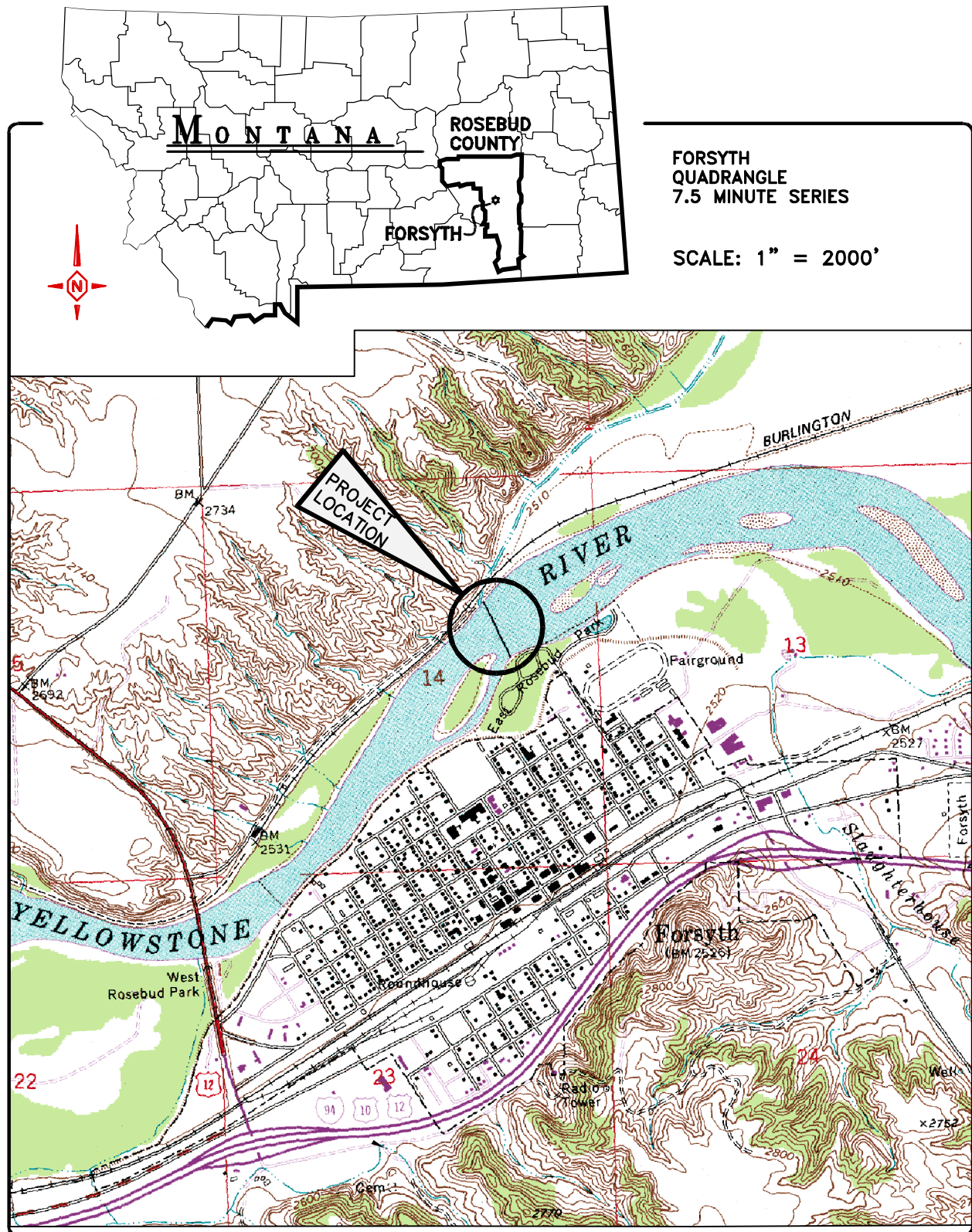
Sincerely,

A handwritten signature in cursive script, appearing to read "Gary Elwell".

Gary Elwell, P.E.  
DOWL HKM Project Manager

Attachment: Figures 1 – Location and Vicinity Map

cc: Jim Darling, FWP, Helena, MT



**LOCATION AND VICINITY MAP**  
**CARTERSVILLE IRRIGATION DAM FISH PASSAGE PROJECT**  
**FORSYTH, MONTANA**

**FIGURE #1**

**DOWL HKM**

26.10216.01

Sept. 2009

**Yellowstone River Conservation District Council**  
**December 22, 2009**

**For Immediate Release**

Contact information: Nicole McClain – 406-223-5702

[yellowstoneriver@aol.com](mailto:yellowstoneriver@aol.com)

December 22, 2009

**Diversion Dams along the Yellowstone River Can Be Fish Friendly**

Don Youngbauer, Chairman of the Yellowstone River Conservation District Council, (YRCDC), announced today that the full Council has come forth with a position statement to encourage cooperation between irrigators along the river basin and those concerned with the overall health and viability of the river.



*Don Youngbauer, YRCDC Chairman, 2009*

“In most all cases, Youngbauer points out, the diversion dams and intakes along the river are aging and in need of repair. The repairs can be made so not to entrain (trap) fish. Many of the intakes and diversions were created when such issues were of little or no concern,” Youngbauer concluded.

Warren Kellogg, who serves on the Council’s Technical Advisory Committee, helped draft the position statement approved by the Council, which is shown here in part:



*Warren Kellogg, YRCDC Technical Advisory Committee Chairman*

The Yellowstone River Conservation District Council support and encourages efforts within the Yellowstone River Basin to seek and develop mutually agreeable solutions in order to provide fish passage and prevent entrainment into water intake or diversion points while maintaining water supplies for irrigation.

Kellogg points out that researchers have suggested that blockage of seasonal migrations for spawning and feeding may be a leading cause of the decline in fishes native to large river systems like the 500 plus mile long Yellowstone River.

Those seeking more information or having questions should contact the YRCDC’s Coordinator Ms. Nicole McClain at [YellowstoneRiver@aol.com](mailto:YellowstoneRiver@aol.com).

The full position statement by the YRCDC is shown below.

Version: August 21, 2009

**Fish Passage Position Statement**

**Position Statement: The Yellowstone River Conservation District Council (YRCDC) supports and encourages efforts within the Yellowstone River Basin to seek and develop mutually agreeable solutions in order to provide fish passage and prevent entrainment into water intake or diversion points while maintaining water supplies for irrigation.**

**Introduction**

Fish passage and agricultural irrigation are two resource issues intertwined along the Yellowstone River. Free flowing river water is needed for either or both to occur and prosper. Where irrigation water is derived by diversion structures spanning the entire river channel it can affect movements or migrations of various fish species. Where water is withdrawn from the river either via gravity diversions or pumps, there is a risk of entraining fish. Data have established that the distributions and movements of many species of Yellowstone River fishes, one of which is the federally endangered pallid sturgeon, are affected by low-head diversion dams. In addition, studies for some unscreened diversions indicate that substantial numbers of fish can be entrained at water diversion points annually. Across the United States and locally, fish passage and entrainment protection measures have been utilized effectively to prevent loss of fish, restore connectivity with habitat, and increase fish abundance without negatively affecting agricultural practices.

**Background**

Researchers have suggested that blockage of seasonal migrations for spawning and feeding may be a leading cause of the decline in fishes native to large river systems (Trenka 2000, Helfrich et al. 1999, Elser et al. 1977). Along with fish passage, entrainment is an issue that needs to be assessed at each diversion point or intake structure. For example, Heibert et al. (2000) conducted an entrainment study on Intake Diversion Dam and found 36 species of fish passed into the irrigation canal during their sample years (1996, 1997, and 1998). Additionally, 14 species of fish were found entrained behind the Shirley Pumping Plant of the Buffalo Rapids Project (Montana Fish Wildlife and Park, unpublished data).

Because numerous barriers and points of entrainment exist in the Yellowstone River basin, it is necessary to evaluate each project on an individual basis in order to identify the best options for fish passage and entrainment protection that are mutually agreeable to both the land owners/irrigators and funding agencies.

The following list provides a few examples of the types of projects this position statement supports:

- The recently completed T and Y dam bypass project and SH dam removal on the Tongue River;
- Efforts at Intake and Cartersville Dams on the Yellowstone River;
- Pryor Creek and the Yellowstone River confluence area;
- Chadbourne Dam on the Shields River;
- Fish screening efforts at Buffalo Rapids Irrigation District's Shirley Pumping Plant.

Agencies involved with Yellowstone River Basin fish passage projects are; Montana Fish Wildlife and Parks, U. S. Fish and Wildlife Service, U. S. Bureau of Reclamation, and U. S. Army Corps of Engineers, and the Natural Resources Conservation Service. Non-government entities include The Nature Conservancy and Trout Unlimited.

### **Role of the YRCDC**

The governor, state government agencies, and regional citizens are looking to the YRCDC for leadership in managing the Yellowstone River. YRCDC, made up of a coalition of conservation districts, has both resource management and producers' well-being as goals. The position taken by the YRCDC is based on recent science findings and past collaborative efforts between agency personnel and private land owners/irrigators. This position seeks to eliminate conflict between economic and conservation interests and supports the YRCDC's role as a grass roots supporter of wise use of resources.

### **References**

- Heibert, S., R. Wydoski, and T. Parks. 2000. Fish entrainment at the Lower Yellowstone Diversion Dam, Intake Canal, Montana 1996-1998. Bureau of Reclamation, Denver and Montana Area Offices.
- Elser, A. A., R. C. McFarland, D. Schwehr. 1977. The Effects of altered streamflow on fish of the Yellowstone and Tongue Rivers, Montana. Technical report No. 8. Yellowstone Impact Study. Montana Department of Natural Resources, Helena.
- Helfrich, L. A., C. Liston, S. Hiebert, M. Albers, and K. Frazer. 1999. Influence of low-head dams on fish passage, community composition, and abundance in the Yellowstone River, Montana. *Rivers* 7 (1):21-32.
- Trenka, R. 2000. Community Structures and Habitat Associations of Fishes of the Lower Tongue and Powder Rivers. Master's Thesis. Montana State University, Bozeman.